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THE KEYSTONE

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STATE COUNCIL OF CIVIL DEFENSE, HARRISBURG, PA.

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The H-Bomb and the Steel Industry

SINCE PENNSYLVANIA produces more steel and steel products than any other state in the U. S. and *more than any foreign nation* the question of this great industry's defense is of primary concern to Pennsylvanians.

Recently Admiral Ben Moreell (U. S. N. Ret.), Chairman of Jones and Laughlin Steel Corp., presented the Secretary of Commerce with a statement on behalf of the Iron and Steel Advisory Council. In this study, made for the American Iron and Steel Institute (reprinted in the May 7th issue of *U. S. News and World Report*) Admiral Moreell said:

"Our studies indicate that with the development of jet-propelled aircraft, long-range guided missiles, atomic and hydrogen bombing, combined with the propensity of our prospective enemy to attack without prior warning, it has become an essential for survival that all of the basic industries of the United States be ready for mobilization and for operation under co-ordinated control at instant notice. This would probably require an industry communications and control center, at a locality relatively free from bombing hazards and connected by telegraph and radio to the major steel-making plants of the country. It would require, also, the ready availability of accurate data with respect to the capacities to make steel products essential for war purposes, as well as the details of manufacturing equipment, transportation facilities, raw materials, and man power. To have our maximum strength in time of emergency, these things should be done **BEFORE** emergency arises."

He pointed out that practically the entire United States is within the great circle radius of 4000 miles of Nur-

mansk or the Chukotski Peninsula of Siberia, directly across the Bering Straits, and said:

"I believe we are justified in reaching the conclusion that delivery by the Russians of an atomic bomb with five times the power of the Hiroshima bomb, or an H-bomb with 1000 times that power should be considered feasible as a basis for planning our defenses."

Since the H-bomb would cause severe structural damage, verging on collapse, within a radius of 10 miles and severe fire damage within a radius of 25 miles from ground zero, it is important to study the vulnerability of the steel industry, and give serious thought to constructive defensive steps that could be taken.

We all know that one cannot fight a war without steel. Other things are needed also, but steel is basic. The steel industry is distributed throughout the United States, but has particularly heavy concentrations in Pennsylvania. The Pittsburgh district alone produces 17-29% of the total ingot tonnage of the nation, as of January 1, 1953. Ten H-bombs, well placed through the nation, could destroy about three-fourths of the steel-making capacity of this country. It must be remembered too, that since most skilled steelworkers live near their plants, this irreplaceable resource would be destroyed at the same time.

Admiral Moreell suggests six measures with respect to the defense of the productive facilities and personnel of the steel industry, and the protection of the continental U. S.:

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Steel plants, oil refineries, busy ports, and manufacturing centers . . . these supply our fighting forces, and would therefore be the enemy's prime targets for attack.

(Photo by Harold Corsini, Pittsburgh Photo Library)

RAISE YOUR OWN HOSPITAL

IF, IN ONE dread night, our 70 most critical target cities were hit by a mass atomic attack—and we must live with the knowledge that such an attack is perfectly possible—it has been estimated that this country would suffer something in the neighborhood of five million surviving injured. These same 70 cities have now only about 650 thousand hospital beds of all categories, not enough even now for day-to-day needs. Furthermore, many of these beds are occupied by tubercular, psychiatric, or criminal patients, so would not be suitable for casualty care. Remember, too, that many hospitals are located near the centers of cities, so we must assume that as many as 75% of them might be knocked out. At best the hospital beds available after mass attack could not possibly care for more than about one million casualties.

What will become of the other four million? We cannot say, "Oh, it is such an awful prospect. Let's not think about it." Yet that, in effect, is exactly what most of us are doing. If we are not merely to abandon the seriously sick and injured casualties, as was done at Hiroshima, we *must* have mobile hospitals which could be set up as close as possible to the stricken area for life-saving initial treatment and emergency surgery. Such hospitals can be used, of course, in natural as well as enemy-caused disasters.

FCDA has developed a 200-bed mobile improvised hospital which it recommends to states and cities. The complete hospital is transportable in a single van. It weighs 13½ tons,

occupies about 2,000 cubic feet, and consists of about 450 separate packages, crates, and bundles. It can be set up in any suitable building, such as a modern school, requiring space about 15,000 square feet. It takes about four hours to set it up, with a crew of 30 trained, and semi-trained auxiliaries, and a number of untrained "huskies." Of course, if a second enemy strike occurs, such a mobile unit can be quickly relocated.

In Korea, a 60-bed Mobile Army Surgical Hospital (known as MASH) provided superior surgical care for non-transportable battle casualties close to the front lines.

The FCDA 200-bed hospital is patterned after MASH, but is considered to be a better size for civil defense because of its economy of personnel and equipment. It would require a team of 10 doctors, 20 nurses, 125 trained nurses aides, and 75 untrained, or partially trained auxiliaries, including registration clerks, and the like.

The hospital includes some 288 different types of equipment, such as five folding operating tables, a portable field X-ray unit, including a generator and transformer, 200 folding canvas cots, plus sheets, blankets, pillows, surgical knives, forceps, probes, retractors, scissors, sponges, sutures, anesthesia, antiseptics, antibiotics, bandages, dressings, etc. Enough expendable supplies such as drugs, medicines, and dressings are included for the first 36-48 hours of operation. These would be replaced from nearby sources. The items are procured through the Armed Forces Medical Procurement Agency. The cost of the complete 200-bed hospital is \$26,435.00, of which the Federal Government will pay half on matching funds. FCDA has ordered 200 as part of the Federal emergency reserve medical supplies; 90 others are on order for the states and cities under the matching funds program.

The hospital is the result of a comprehensive study of the problem by medical, nursing, hospital, and supply officials of the Armed Forces, FCDA, and the states.

Although we realize that few communities in this Commonwealth are in a position to buy such a unit outright, even on a 50% basis, nevertheless, there is no reason why each community should not be aiming towards the establishment of a similar, though possibly smaller, mobile unit of its own.

The local Medical Division should determine what it considers are the basic needs, whether it be for a 200-bed, 100-bed, or 50-bed hospital. Of these some items will necessarily be purchased, as for example, field X-ray equipment, a generator, operating tables, and basic surgical instruments. Other items could be collected in a community drive—such as scissors, bandages, enamel bowls, emergency lights, sheets, blankets, pillows (if deemed necessary) and perhaps even cots for the most seriously injured. Most communities will have to obtain their drugs and expendable supplies locally as best they can, during the first few hours of need, before State stockpiles can be transported.

Such a mobile unit would be a valuable community asset following a tornado, an explosion, or bad train wreck, as well as *vital* after enemy attack. A great part of its value would lie in its mobility. If the parcels and crates were already packed, ready to be loaded onto a van, the unit could be set up and functioning wherever it was needed very quickly—and those first few hours will count in terms of pain, and lives.

How could a town get such a unit?

As with every aspect of Civil Defense, if you divide the load, spreading it over many shoulders, it will not rest heavily on any. Here, as in so many C.D. tasks, the women can do a job. We suggest that a Women's Medical C.D. Auxiliary be set up, made up of doctors' wives, nurses, Red Cross personnel, and graduates of Nurses' Aides and First Aid training, for these are the ladies likely to be the most interested. The CD Medical Division would give them the list of equipment it thinks basic for a mobile hospital of a given size—50, 100, 150 or 200 beds, depending on the size of the community. Then the job of the Women's Medical C.D. Auxiliary would be two-fold:

- 1) To put on various events, benefits, card parties, and the like, to raise money for the medical and surgical essentials;

- 2) To put on a neighborhood drive to obtain the remaining items through donations, either on a door-to-door basis, or, and this would be more fun, by giving a community party and holding a Scavenger Hunt for the items, or requiring specific items as entrance for some entertainment.

Or the list could be divided with certain items assigned to each of the leading clubs and organizations in town, to obtain in any way they desired. Thus the Mobile Hospi-

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COMMONWEALTH OF PENNSYLVANIA STATE COUNCIL OF CIVIL DEFENSE

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Free subscriptions to this publication may be obtained by writing to the State Council of Civil Defense, Capitol Building, Harrisburg, Penna. Address: Miss Alison Raymond, Editor.

LOCAL 3733 SHOWS THE WAY

By Coster "Slats" Schloder

LOCAL 3733 USA-CIO, of Reading, Penna., can serve as an object lesson to union groups throughout Pennsylvania. Early this year they decided to form a Civil Defense Unit, consisting of four parts: Medical, Fire, Rescue, and Auxiliary Police. The following is a report on the progress of their Medical Unit, taken from the April, 1954, issue of Union Views, and written by Coster "Slats" Schloder.

"First of all, every member of our Civil Defense Unit must have a standard Red Cross First Aid course to his credit. We have two classes operating at present, one in the afternoon and the other in the evening. These classes last for 11 weeks; they are followed by an advanced course of 7 weeks given by the doctors of one of the hospitals. The advanced course includes caring for severely injured, giving blood and plasma transfusions, administering drugs and vaccines and other laboratory work.

In September a new basic course will be started with Union members' wives, and daughters over 18, allowed to participate.

Women can play a large role in the medical picture. They can be excellent first aiders, ambulance drivers, and clerks.

A total Medical Unit will total 52:

1 doctor; 1 nurse; 1 captain; 1 1st Lt.; 2 2d Lts.; 12 aidmen; 1 clerk; 21 litter bearers; 12 ambulance drivers.

This Civil Defense Unit is not only being trained for use during bombing attacks, but for use in any major disaster that can happen, such as fire, tornado, flood, earthquakes, riots, and epidemics. Every able-bodied man and woman should have a first aid course, especially auto drivers, hunters, and fishermen. You can never tell when this knowledge may save a life or prevent an injury from becoming more serious or even fatal.

There will be no discrimination concerning men or women, or of race, religion, and color in our Civil Defense Unit. Remember, when you are hurt, you don't care who takes care of you as long as you are attended. We are in this Civil Defense Unit to help each other.

When our classes graduate, they will become a part of the Berks County Volunteer Medical Service Corps, with headquarters at the Reading Hose Fire Co. Our standby headquarters is located in Yocum's Schoolhouse in Grill. The Berks County Volunteer Medical Corps meets six times a year, and all volunteers are urged to attend. Some of the meeting time is spent on business affairs, but the major portion is devoted to demonstrations, lectures, and training films.

There has been far too little talking done on Civil Defense in the shop or out of the shop. Many men don't even know we have a program started. Let us talk it up inside and outside. United, we can be sure of success. We can prove to the people of Reading and Berks that Unions can and will work for the common good. United, we can add still another chapter in our Local's Community Service Program.

men who volunteer their off-duty time to fill regular shifts.

Such military OP's are located at Air Force bases, Army camps, Naval yards, Coast Guard stations, and many other types of military installations throughout the nation.

Many industrial plants also have guards or police on 24-hour duty. Those localities which are having difficulty in recruiting watchers are again urged to consider the possibility of working out some arrangement whereby these men, while on duty, could assist in the job so vital in this day of jets.

Have you thought of integrating some of these 24-hour workers in your GOC Post?

Still other military observation posts are manned either partly or entirely by

G. O. C. ITEMS

Mrs. FRED FROMM, of Midlands, Michigan, can look after her household chores and still send in aircraft observations. On a tall utility pole in her yard she has mounted a home-made "electronic ear," developed with the help of the Consumers Power Company and the instrument department of the Dow Chemical Company. Thanks to this instrument, she can be warned of approaching planes long before they can be heard by the human ear.

The Midland Daily News describes her instrument as a loudspeaker from an obsolete intercommunications unit, in which the normal operation has been reversed. Instead of broadcasting, the "ear" picks up sound.

* * *

400 coastwise vessels in the First Coast Guard District will assist the GOC as aircraft spotters. This is considered to be an interesting and important advance in the CD program in that area.

* * *

Mrs. Albert Jenkins, of Avon Heights in Chester County, recently received \$5.00 from "The Journal of Living" for a small item she submitted for their "Gloom Chaser" column. It read "My favorite Gloom Chaser is to go to the Observation Post and spot planes for Civil Defense. The knowledge that I am rendering a service to my country is so satisfying that my gloom soon vanishes."

* * *

The Hq Air Defense Command reports that in March 2900 new volunteers were added to the GOC, across the country, and that on April 1st, they had reached the all-time high of 336,130 volunteer spotters.

Pennsylvania has two Filter Centers to which posts report, one in Pittsburgh, and one in Harrisburg. Other Pennsylvania posts report to Filter Centers in neighboring states.

The record for the Pittsburgh and Harrisburg Centers for April 1 were as follows:

Pittsburgh

No. of posts required	357
No. of posts organized	250
No. in operation	103
of these, 80 are part-time, 23 on 24-hour watch)	
No. of OP volunteers	9000

Harrisburg

No. of posts required	312
No. of posts organized	225
No. in operation	71
(of these, 59 are part-time, 12 are on 24-hour watch)	
No. of OP volunteers	7000

Observations Posts on Military Installations

ALTHOUGH THE Ground Observer Corps is a civilian organization, its ranks are being swelled appreciably by uniformed personnel of all the services. Throughout the GOC there are 347 observation posts on military installations manned voluntarily by servicemen.

Of this number, 307 posts are on 24-hour operation. The remainder are either part-time, or are in the standby area.

Most of these military OP's are located at guard posts which are manned around the clock by military policemen. The guards can easily work skywatching into their regular duties.

Still other military observation posts are manned either partly or entirely by

CIVIL DEFENSE ON THE FARM

FCDA and the Department of Agriculture have been working together in the field of rural defense against atomic and biological attack. Experts agree that, so far, farm CD has been "sadly neglected," but FCDA lists five primary jobs in this area:

- 1) To assure a food supply for the nation;
- 2) To guard against disease among livestock, and against biological warfare in the plant world;
- 3) To maintain a basic self-protection system against fire, accidental bombing, and other attack, or disaster-induced hazards;
- 4) To be ready to receive the injured and homeless from cities;
- 5) To assist stricken areas by blood donations, services and loans of such equipment as trucks, two-way radios, bulldozers, portable lights, small generators, etc.

FCDA is setting up "model communities" in various parts of the nation to analyze farm problems. The first, in the New Market District, in Maryland, has received the praise of the National Grange.

While those who live in rural areas are not likely to be hit with atomic or hydrogen weapons, let no one think they will "sit out" any attack on our cities. They, too, are vulnerable to fire attack—incendiary bombs are light, cheap, easily dropped from planes or distributed by saboteurs. Raging fires throughout our rural areas would do

much to disrupt the state, preventing evacuation, and the mobilization of aid-teams from support areas; they would, therefore, be to the interest of the enemy.

The entire food distribution system of the nation would be disrupted if several cities were knocked out. Where would you market your goods? How would you transport them? Where would you get the staples and other supplies which now appear regularly in your local stores?

A power failure many miles from your farm could strip you of power. How would you milk your herd, now that it is too big to milk by hand? How would you maintain the proper temperatures in your freezing units, your poultry breeders—wherever you control condition by electricity?

These questions are not to be answered easily, but they are none the less real, and should be carefully considered in your Grange meetings, in your county agricultural meetings, and everywhere that farmers meet to discuss their common problems.

You, in your own home, should be very certain that you are as well equipped as possible against fire, that you could look after major injuries, especially burns, without the aid of a doctor if necessary; and that, if you depend in large measure on electricity, you have some form of auxiliary power.

WARNINGS PAY—IF HEEDED

WHEN A WIND of enough violence to blow over houses hits your town, it does not matter a great deal whether it is caused by an atomic or hydrogen bomb, or by a good old-fashioned tornado—the blast effects are much the same.

Therefore it is worth our while to see what has been happening in the tornado areas—and it is startling. On the "duck and cover" theory, based on a well-developed warning system, only two people lost their lives in thirty-eight tornado-stricken communities in Texas and Oklahoma this spring. In previous years, similar storms have killed scores of people.

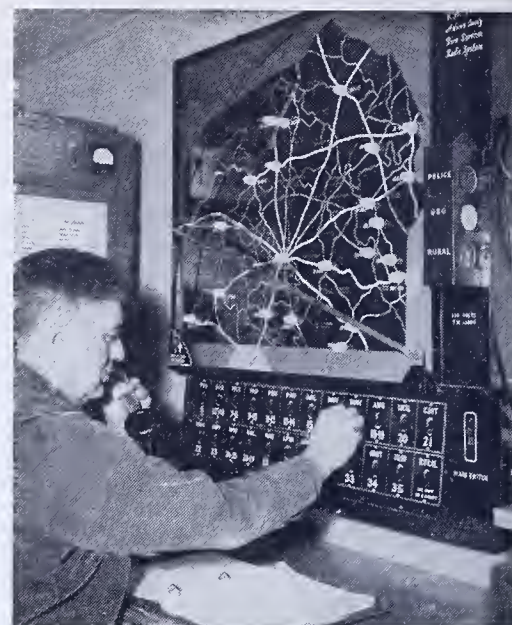
The warning system now in use has been years in the making. It consists of a network of forecasters, volunteer observers, radar trackers, state police, radio and television stations and newspapers. The heart of it is the severe storm warning service of the Weather Bureau, in Washington. When a sign of instability shows, the warning sys-

tem is thrown into gear. So for this season, when a twister may funnel down anywhere east of the Rockies from Florida to Canada, only three tornadoes have hit in unwarned areas.

With advance warnings, residents can scurry into storm cellars, basements, and other places of comparative safety. The important thing to note is that they DO take shelter, and that, therefore, they live. Debris, flying rubble, crashing trees are no fun, but if you are below the surface of the ground your chances of being hit by them are greatly lessened. The same will be true in most of the damage area of any bombs that may ever be dropped on this country. Warnings pay off, but only when they are heeded by the public.

Remember it will be many months before warning will be adequate to even consider evacuation. There will never be warning for guided missiles. Be ready to take quick shelter; blast and tornadoes are alike.

A RURAL COUNTY'S COMMUNICATIONS



Central Station of the Adams County Network

SOME MONTHS ago the Adams County communications set-up was described. Pictured herewith is radio station KGA-925, the central station of their county-wide network which, using its mobile units as relay stations, could control vehicles and send messages over 300 miles.

To the left is the main sending and receiving set. The light board has a lamp for every fire department in the county with one or more radio units. The arm extending across the board is used to indicate the exact location from which any emergency call originates.

When a call is received, the lamp for each station on the air is lighted by the operator. This enables him to know at a glance just what emergency units are in action and what others can be ordered out or placed on a standby basis.

Eugene S. Sickles, the designer and builder of the indicator board, is shown operating it with the station log in front of him. Mr. Sickles is one of the licensed operators and an assistant to the County Civil Defense Director. Adams County feels that this short wave radio set-up is worth every cent of its \$14,000.00 cost.

Adams is joining with Dauphin, York, Franklin, Perry, and Cumberland counties in the June 14th exercise, at which time this communications network will be well used. Adams is to be congratulated on working out such a flexible, workable, double-functioned unit.

PANIC, PSYCHOLOGY, AND THE BOMB

Three-in-One Job

THIS TITLE is taken from that of an article by Mr. Philip Wylie (author of "Tomorrow") in the February issue of the Bulletin of Atomic Scientists. It gives much food for thought. Mr. Wylie, who has for three years been consultant in this field to FCDA, does not agree with the FCDA official position on panic proneness of the American people. The U. S. Government view, after a long and exhaustive study of public responses to calamity, is that the American people will not panic or stampede under atomic bombing. Mr. Wylie's conclusion (based on the same data as used for the government-sponsored studies but seen from a different point of view) is that the American people undoubtedly *would* panic under such bombing *in their present state of mind*. His conclusions, he says, were based mainly on two factors:

- 1) The American public is already exhibiting on a massive scale a vast variety of "symptoms" defined as "hysterias";
- 2) The psychological effects of atomic attack, even on persons not already afflicted with hysteria, would be greater and more damaging even than the awesome physical and material effects.

Of the accusation, by the rest of the world, that the United States has the "atomic jitters," he has this to say: "Do we have them? We surely do. One example is our widespread 'apathy.' We are a people who insure ourselves against every 'Act of God' from fire to sickness. We spend billions to control floods. We practise preventive medicine on a national scale. We set up fire towers in forests, frost-warning services—heaven only knows what other protective devices, but, against a foe whose philosophy will triumph only if we and our institutions are crushed—a foe rapidly building nuclear weapons—we have taken less than a formidably disproportionate number of protective steps recommended by government experts who have contemplated *only the physical risks*, and not the psychological jeopardy envisaged here. Is not a good part of that immense 'apathy' a sign of hysterical paralysis? Can anybody bring forth logical, rational arguments to support such behavior as appropriate under the existing conditions? It is, of course, unreasonable inaction."

Commenting on the three major psychological effects of the atomic bomb on the Japanese people who survived the attacks, which were:

- 1) The spectacle of the bomb and its after-effects;

- 2) the sight of the casualties and their overwhelming numbers;

- 3) The fear of all survivors of another bomb.

Mr. Wylie states that to these three must be added at least two more "for our population"—one that panic is contagious, and the other, that instead of taking the probability of panic into account, many measures have been employed that will add to it.

"For example," he writes, "over the years, the main highways leading into and out of big cities have been posted. 'In case of enemy attack,' the signs say, 'these roads will be closed to all but defense vehicles.' Lately, I have noticed similar signs on main residential streets in some cities. To think that people, a bomb cloud above, a fire storm behind, wounded and rolling around, radioactive dust on their heels, will obey these signs, is almost insane. In particular, people will ignore attempts to close off the streets *on which they live*. To imagine they can be checked is like imagining Niagara Falls can be reversed by a regiment equipped with teaspoons."

"Hysteria and panic arise from the unknown and the misunderstood, the withheld, the hinted, the suspected, the ignored, and from the repressed dread that materializes unexpectedly." He does not support the findings of the Lehigh Report, which attributes public "unawareness" to insufficient educational and informational activity. "The people know enough," he says, "—enough to be afraid to a degree they cannot even acknowledge." He feels that only the "full use of Executive authority in the formation of a committee, of overwhelming popular authority and credibility, can take the measure of 'our vast vulnerability.'"

This conclusion is of particular interest in light of the fact that it is repeatedly being urged from many sources that Civil Defense be established as a fourth arm of defense, in the Defense Department, with a Secretary of Civil Defense, given an equal footing with the Secretaries of Army, Navy, and Air, and representation on the Joint Chiefs of Staff. If this were done, the whole attitude of the nation towards the importance of defense on our home-front would be fundamentally changed. It is hard to see how lesser measures can change the current inertia.

(Much of this article was taken from the Civil Defense Bulletin of Canada.)

Three jobs were done at once in Richland Township, near Johnstown, Pa., when a single questionnaire covered:

- 1) Household information needed by both the Warden and the Welfare services;
- 2) Volunteer information, as to which service the recipient would be willing to join.

"Our civil defense unit has used these questionnaires to great advantage," reports Mr. Daniel H. Slagle, Director for Richland Township.

The questionnaire, which covers just one mimeographed page, was sent to the homes throughout the school system through the good help of Dr. Glenn Hess, the Supervising Principal. The oldest child attending school for each family was given the questionnaire, and asked to bring it back, filled out, within a week. Each teacher was asked to keep a record of those given out and those returned; the result was very close to 100%.

The information pertained to size and type of building, number of persons living in the dwelling, those infirm, number of entrances to both building and cellar, type of fuel used, space available for evacuees, emergency materials available (such as blankets, flashlights, first aid materials, etc.). It also asked if the recipient owned a car, and whether he (or she) would serve in one of the regular CD services (which were then listed, to be checked).

The building information obtained was listed in a file index system for future use by both the Warden and the Welfare services.

The volunteer information was also quickly followed up. A notice was sent to each person who had indicated a willingness to serve, inviting him (her) to a general public meeting, at which local plans were outlined. In addition, each division chief was given a list of persons who had indicated a willingness to help in his division. He, in turn, was to contact these people and get them started immediately in training programs.

Meanwhile a crew of contact men was developed to cover the homes where no school children lived.

This is the type of inventory every community should have. One cannot work without knowing what equipment and manpower is available; Richland is not waiting until it is "too late" to train and organize its people.

FIRE!

"ALWAYS THE OUTSTANDING feature, no matter what the weapon used, was the appalling consequences of mass fires, regardless of whether cities were blitzed, "atomed" or otherwise attacked," according to exhaustive post-war studies.

Enough fires, burning in a concentrated area, start fire-storms, infernos with columns of burning gases rising as much as two miles high, sucking air in from the surrounding area with such force that great trees are uprooted as if they were pickets. In some areas, it was 48 hours before men could get near enough to the fires to make even an attempt to put them out.

The estimate is that "severe fire damage will be caused in a radius of 25 miles" around every H-bomb burst; atomic bombs would cause fires on a front of roughly a twelve-mile perimeter. Besides the large conflagrations, it is inevitable that in time of attack, innumerable small fires will be caused by broken gas mains, overturned stoves, flying sparks, and intense heat flashes. Window curtains were set afire two miles from Hiroshima by the heat flash alone. The same thing could happen to piles of leaves, of papers, of trash in this country.

These small fires will *have* to be fought by the civilian population, either by householders, fire guards in industrial plants, apartment houses and office buildings; or fire teams in schools and colleges. The fire companies will be working till they drop with exhaustion at the big fires.

To provide stricken cities with enough equipment to fight their major fires, pumpers will obviously have to be brought from as far as 100 or more miles outside the damaged area. The State Council of Civil Defense has been making plans along these lines; furthermore, emergency State-owned supplemental equipment will be sent to the scene; Federal stockpiles of hose have been stored in strategic places.

But this equipment will be of no avail unless there are men trained to man it around the clock, and unless the civilian population is trained to handle the small household and plant fires before they merge together into firestorms.

How many Auxiliary Firemen do you need? It depends on what equipment you have available. A minimum of thirty men should be trained to operate each pumper on a 24-hour basis, or ten men for each 8-hour shift. The difference between that figure and the number of men now serving in your Fire Department is the very minimum number of Auxiliaries you need. In addition, you will need men for all other pieces of apparatus in about the same proportion. The existent Fire Forces in every community in Pennsylvania, be they paid or volunteer, should be training additional men to serve under them, as Fire Reserves, ready to relieve them, run hose for them, or work side by side with them in fighting fires which could cover as much as miles with a roaring wall of fire at one time.

Like "safe driving," taking precautions to avoid or minimize fire hazards, is a dull, uninteresting subject.

None the less, accumulated trash, papers, empty boxes, oily rags, and the like greatly increase the danger of fires starting, as well as spreading once started.

This is true in peacetime; if an H-bomb is ever dropped, fires will be started as far as 25 miles away, especially in those houses full of combustibles.

Fireproof housekeeping is a matter of habit, in homes as well as in industrial plants. What kind of a habit have you?



Pennsylvania's 2200 fire companies, heavily augmented with trained Reserves, will form one of the most needed and most critical groups of our entire defense.

Able-bodied men of all ages are urged to sign up as Fire Reserves at their local Civil Defense offices, *then take the training*. Only trained men can fight as a team, with skill and knowledge, in the face of persistent raging holocausts.

Look Who Doesn't Want It!

"The 'utter futility' of the Civil Defense program has been demonstrated," the Communist Party stated.

In a telegram to Mayor Wagner, the Communists proposed that he "cut out the Civil Defense appropriation from the 1954-55 city budget as useless, and apply the funds to school purposes."

(Quoted from the NY State CD NEWS-LETTER)

A Valuable Offer

Allied Van Lines recently pledged the use of its new quarter-million dollar terminal in North Hollywood, California, as a hospital or evacuation staging point for Civil Defense in emergency, according to its President, Mr. Louis Schramm, Jr., of New York.

Terminals and warehouses, with their space, their lifts and their facilities, would make excellent staging areas. Communities in this State would do well to make contact with moving companies in their own localities, with a view to securing similar pledges of cooperation.

Atropine for Nerve Gas

THE LIFE-SAVING antidote for nerve gas can now be made artificially, it was reported last month by the Winthrop Stearns Co. of New York and the Associated Press. Previously atropine has been obtainable only from plants which grew primarily in Iron Curtain countries controlled by Russia. The new synthetic drug, made with chemicals from petroleum, frees this country from dependence on foreign supplies.

The New York firm has supplied 330 pounds of atropine for Defense Department stockpiles. A life-saving dose is only 1/150th of a grain of atropine sulfate, therefore enough already exists to treat 400 million people, according to this report.

THINK IN BIG TERMS

AS WE GO ABOUT the counties, we are frequently disturbed at the small scale of thinking that is common to preparedness measures.

"We have handled fires for years without outside help," you'll hear. "We don't need auxiliaries. They'll only get in our way."

"We have a mobile canteen," another community will tell you proudly. "We can feed 100 people."

"Our first aid unit is the best in the State," someone else will boast. "We have 18 doctors, ten nurses, two tents, and an ambulance."

We are not throwing cold water on these units. We are delighted that they exist, but they are not enough. The scale of the disaster we are considering is in terms of thousands not hundreds; there will be millions near the big cities, and these will fan out into every community in the Commonwealth. In other words, every town and village, no matter how remote, will need auxiliary police; auxiliary firemen to cover its own needs if the regulars are called out; medical aides; and women trained to care for large numbers of homeless. These groups will not spring to action overnight ready to be valuable. The time to be gathering them together, training them, and giving them specific places where they would mobilize, is NOW.

Let us think again about the magnitude of the job facing us. Let us go back to the city of Hamburg, for there we can study what actually happened to an industrial center under heavy bombing. Nearly two million civilians, a large proportion of them skilled workers, occupied its 288 square miles. Hamburg had an able civil defense organization. Its leaders knew that allied bombers would try to wreck the harbor, and the factories located there. Industrial, local, and civic groups had met and drawn up a well-conceived plan for their defenses.

About one million of the residents had had some rudimentary training in fire-fighting. Some 9000 civilians had taken specialized C.D. training of some sort. Shelters of different kinds seemed adequate, as did fire-fighting equipment and other supplies. Hamburg anticipated a pounding. It got all set for the known, for the expected.

But what they got was the unexpected—as we probably will too, if war occurs. Hamburg was subjected to overwhelming mass attacks; German air defenses could not stop them; the

weight of the attacks was unheard of. In ten days, however, the bomb load totalled less than what American cities can expect in three seconds, with the new types of weapon.

What resulted was the worst man-conceived damage that had ever been inflicted on a modern city up to that time. At one stage of the attack, 129 miles of building frontage were ablaze. Finally, millions of little fires merged into one big fire-storm, such as was not to be seen again until 1945 in Hiroshima. Let the Pennsylvanian firemen who think they "will not need any help" ponder those facts.

About 60,000 people died in Hamburg. Some were killed outright. Some were smothered in their mass shelters as the fire-storm sucked out all the oxygen. Some were burned to death, trapped in the debris of their own homes.

And what happened to the civil defense organization?

Well, the plans worked—up to a point. Civil defense was in there fighting. At first it was a losing fight. While 6200 densely-built acres of property went up in flames, communications broke down completely. Observation posts were abandoned because the smoke was too dense. Streets were debris-choked. Transportation fell apart, and the water system went out.

But civil defense workers struggled on. Mutual aid arrived from surrounding communities. Note that fact. Without it, Hamburg could not have functioned at all. The C.D. officials who were left, reestablished communications of a sort, with messengers going on foot over and around the smoking debris.

"Awful" you will say. "If it comes to that, we might as well give up. We can't ever withstand modern attacks."

Nevertheless, despite the fires and the damage, the final count showed that civil defense workers pulled nearly 40,000 injured persons out of Hamburg's rubble and helped them to safety. *A million two hundred thousand persons* got out of the burning city. They were fed and cared for by the surrounding communities and the rural folk. That took advance planning. Remarkably, there was very little panic.

Two conclusions can be drawn from the Hamburg story—a story familiar to many of us, but none the less full

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H-BOMB AND STEEL

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1) A radar screen *in depth* (i.e., successive circles of radar installations);

2) Installations at strategic points for launching U. S. interceptor planes and missiles;

3) Ample anti-aircraft defenses surrounding important target areas and their approaches;

4) Personnel shelters at important operations wherever feasible;

5) An adequate U. S. strategic bombing force, capable of delivering A and H bombs to the enemy targets—the threat of reprisal is hoped to have a deterrent effect;

6) The progressive dispersion of vital facilities, including personnel.

Plant dispersion is, of course, a complex, expensive problem involving considerations of transportation, power, proximity to markets, sources of raw materials, housing, etc. A study was made of dispersal of 25% of the country's basic steel-producing facilities and their personnel in such a way as to minimize the hazard of losing any major part of this capacity by direct bomb damage. The total estimated cost came to approximately \$9 million, for plants which could make and process 30 million tons of ingots. Says Admiral Moreell, "In the light of the huge sums which we have expended since the war to build up the defensive power of European and other nations, this would appear to be a small price to pay for our own security."

Wherever possible the equipment for such plants should of course be standardized so that parts and spare parts would be interchangeable. Admiral Moreell believes that such vital industry dispersion can be done only on a *progressive* basis; however he feels that there should be a *plan* for dispersal of each major industry and that, as replacement of capacity becomes necessary, it be done according to that plan. Many industries, such as rubber, copper, glass, aluminum, textiles, automobiles, electric products, etc., face the same problems as the steel industry. Says the J and L Chairman:

"All of us should now be busy making plans. Perhaps I have over-emphasized the hazard under which we now live. I do not believe so. The facts which are coming out with respect to the tactics and policies of the Communist enemy in China and Korea, added to what we already know about them, justify the conclusion that we are facing a ruthless adversary who will permit no humane considerations to influence his decisions, who will strike without prior warning, and whose ambition is to rule the world."

FROM HERE AND THERE

Newsweek's Feature "Periscope" reports: "It is becoming more and more clear in Oslo that Franz Josef Land, in the Arctic Sea, is the most likely jumping-off place for any Russian airborne attack against the U. S. Intelligence sources report the Reds are building up bomber and guided missile bases on Franz Josef Land, not far from the U. S. bases in Greenland. From Franz Josef Land, long-range bombers could reach Chicago, Cleveland, and the atomic works at Hanford, Wash., in six hours."

* * *

A gadget smaller than a first grader's lunch box, being manufactured for CD by a Philadelphia electronics firm, could have saved the Japanese fishermen, according to the Philadelphia Inquirer of March 21, and kept them from suffering radiation poisoning through unawareness of their plight. The little gadget is called a radiological survey meter. It was developed to specifications of FCDA, to detect nuclear radiation. Carrying the trade name of Rad-Tek,, the meter is the first instrument of its type to meet the full requirements of FCDA, according to the news story. The set will sell, at present, for \$139.50. Some 2000 have been produced to date for distribution to Federal, State and local CD agencies.

* * *

A million, five hundred thousand birth and death records have been microfilmed and stored in safety by the State Boards of Health in Oregon. This will insure that the records, necessary for proving dozens of such personal facts as citizenship, or rights of inheritance, will be available to citizens despite the loss of originals, if Portland is bombed.

* * *

Twenty-four pilots of CAP's Pennsylvania Wing transported in their own personal planes a sixteen-bed field hospital, its forty-five personnel and a ton of equipment to Indiantown Gap from Allentown, Pa., a distance of sixty miles by highway, forty-five by air. It took two hours. The demonstration was made to show how amateur pilots, flying small pleasure craft, could rush an entire field hospital unit into an area stricken by disaster, even under adverse flying conditions. Air Force officials declared the demonstration proved the value of the CAP in Civil Defense; an air lift on so large a scale had never been attempted previously in planes of this type.

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IN BIG TERMS

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of valuable lessons which we tend to forget:

1) Civil defense planning in Hamburg was wrongfully limited to the known and the expected. When the unknown and the unexpected came, the plans were snowed under.

2) Even in the midst of total chaos, the civil defense workers functioned after a fashion, and, thanks to help pouring in from neighboring communities, were able to save almost two million people who might otherwise have been lost.

The moral for us is that in our communities, in our industries, we must be prepared for the unprecedented and tremendous unknown.

If we are realistic, we must accept that in all-out war, our communities and our industries are the Number One targets. The enemy is shrewd enough to know that he can get the greatest return per unit of destruction by flattening our factories and the homes where our workers live. It is self-evident, that without our homes and factories, our Armed Forces would have nothing to fight with—and nothing to fight for.

Our facilities for home-front protection must be adequate not only to meet small peacetime disasters, but to hold together and function in an all-out, massive wartime disaster of at least the size of Hamburg's. Your complacency should be in direct relationship to your answer to the question "could you meet such a situation?"

The June 14th alert pointed up many lessons in each community. Have you relaxed since then, or are you profiting by that experience?

MOBILE HOSPITAL

(Continued from page 2)

tal would become a truly community project.

Another possibility would be to hold a "back-to-front" auction, in the local auditorium or movie house, prior to an entertainment. Get the required materials from local merchants, and set them on the stage. Working with a good auctioneer, tell the audience that certain bidders will be lucky. They are not bidding for purchase themselves, but should call out what they are willing to contribute towards the purchase of the item under consideration. A large gong announces the "lucky bidders" who will be given double the amount they just pledged as a prize.

If, through one means and another, the hospital needs were collected, we venture to guess that a local department store, or a nearby manufacturing plant would package the equipment for you as a donation, and possibly also agree to store it as a community service.

If your community goes at the job with vigor, it could raise a mobile hospital in six weeks. Then, while enthusiasm is running high, they should state specifically the personnel needs for manning the unit—so many first aiders, so many nurses' aides, so many clerks, so many litter bearers.

Recruiting on a specified basis, training classes should be started immediately.

Many projects sound overpowering until you break them down, but if you divide the task among many, and go at each part, step by step, they are not really so difficult. Each one that you tackle and successfully complete, means lives saved in your own town . . . perhaps in your own family.

Is there any job in your community more important than this?